

Vifor (International) AG

Claims

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1. Water soluble iron carbohydrate complex obtainable from an aqueous solution of iron (III) salt and an aqueous solution of the oxidation product of one or more maltodextrins using an aqueous hypochlorite solution at a pH-value within the alkaline range, where, when one maltodextrin is applied, its dextrose equivalent lies between 5 and 20, and when a mixture of several maltodextrins is applied, the dextrose equivalent of the mixture lies between 5 and 20 and the dextrose equivalent of each individual maltodextrin contained in the mixture lies between 2 and 40.
2. A process for producing an iron carbohydrate complex according to claim 1, wherein one or more maltodextrins are oxidized in an aqueous solution at an alkaline pH-value using an aqueous hypochlorite solution and the obtained solution is reacted with an aqueous solution of an iron (III) salt, where, when one maltodextrin is applied, its dextrose equivalent lies between 5 and 20, and when a mixture of several maltodextrins is applied, the dextrose equivalent of the mixture lies between 5 and 20 and the dextrose equivalent of each individual maltodextrins contained in the mixture lies between 2 and 40.
3. A process according to claim 2, characterized in that the oxidation of the maltodextrin or the maltodextrins is carried out in the presence of bromide ions.
4. A process according to claim 2 or 3, characterized in that the iron (III) chloride is used as the iron (III) salt.
5. A process according to claims 2, 3 or 4, characterized in that the oxidized maltodextrin and the iron (III) salt are mixed to form an aqueous solution having a pH-value so low that no hydrolysis of the iron (III) salt occurs, whereafter the pH is raised to 5 to 12 by the

addition of a base.

5 6. A process according to any of claims 3 to 5, characterized in that the reaction is carried out at a temperature of 15 °C up to boiling point for 15 minutes up to several hours.

10 7. A medicament containing an aqueous solution of an iron carbohydrate complex according to claim 1 or 2 or obtained in accordance with any of claims 3 to 6.

8. A medicament according to claim 7 formulated for parenteral or oral application.

15 9. Use of the iron carbohydrate complexes according to claim 1, or obtained in accordance with any of claims 2 to 6, for the therapy or prophylaxis of iron deficiency.

20 10. Use of the iron carbohydrate complexes according to claim 1, or obtained in accordance with any of claims 2 to 6, for the production of a medicament for therapy or prophylaxis of iron deficiency.

25 11. Water-soluble iron carbohydrate complex according to claim 1 for therapy or prophylaxis of iron deficiency.

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